DOCUMENT RESUME

ED 225 605 JC 820 531

AUTHOR Gose, Frank J.
TITLE Simulating Revenue and Expenditure Limit Projections for a Community College in Arizona.
PUB DATE Oct 82
NOTE 34p.; Paper presented at a Joint Conference of the Rocky Mountain Association for Institutional Research and the Regional Society for College and University Planning (Tucson, AZ, October 27-29, 1982).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *College Planning; Community Colleges; *Educational Finance; *Expenditures; Finance Reform; Financial Policy; *Income; Simulation; Two Year Colleges

ABSTRACT

In 1980, the Constitution of the State of Arizona was amended to establish expenditure limits for a number of political entities, including community colleges. Limits were also established on revenue derived from local tax levies. Concern that limitations on revenue and expenditures could place real constraints on community college operations within 1 to 2 years led to the development of a computer model at Yavapai College to project changes in revenue and expenditure at the college over a 5-year period. The model, written in BASIC and run online in real-time, simulates possible changes based on major alterations in variables affecting revenue and expenditure limits, i.e., full-time student equivalents (FTSE's), the Implicit Price Deflator (IPD) of the Gross National Product, county assessed valuation and net growth, and other budgeted revenues. In six simulations, which assumed various changes in FTSE, county property valuations, and increases in the IPD, the college did not appear to be constrained by the expenditure limit. Two of three sensitivity simulations indicated that college expenditure could be constrained under varying conditions of the IPD or assessed valuations or a combination of both. Appendices include base figures for the simulation model and identification of variables; simulation data; and expenditure and revenue limit assumptions and projections for 1982-83 to 1986-87. (Author/HB)

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SIMULATING REVENUE AND EXPENDITURE LIMIT PROJECTIONS FOR A COMMUNITY COLLEGE IN ARIZONA

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Frank J. Gose, Institutional Researcher

Yavapai County Community College District
Prescott, Arizona 86301
(602) 445-7695

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Abstract

In 1980, the Constitution of the State of Arizona was amended to establish expenditure limits for a number of political entities, including community colleges. Limits on revenue derived from local tax levies were also established. These limits became fully effective for the 1981-1982 fiscal year.

Initially, it was thought that the expenditure limit would not truly constrain community college budgets, due to a number of exclusions and also due to the expectation that the expenditure limit would increase more rapidly than the levy revenue limit. By the 1982-1983 fiscal year, however, it was apparent that the expenditure limit could truly limit some community colleges within one or two years.

In order to better assess the major factors affecting the expenditure and revenue limits for a community college, a computer model that produces five-year projections has been developed at Yavapai College. The model was written in BASIC and is run online in real-time. The major factors affecting the limits (full-time student equivalents, the Implicit Price Deflator of the Gross National Product, county assessed valuation and net new growth, and other budgeted revenues) become variables that take on unique values in each simulation. The model is being used to establish ranges within which the variables can fluctuate without adverse financial affects on the college.

The model is nonstochastic in design. The model has served three additional purposes: first, it has provided a means of better understanding the fiscal environment; second, it has provided better information to decision-makers who control some aspects of the fiscal environment; and third, it has helped to train persons in existing knowledge of the fiscal environment.

VC 820 531

Paper Presented At
A Joint Conference of the
Rocky Mountain Association for Institutional Research (RMAIR)
and the
Regional Society for College and University Planning (SCUP)
October 27-29, 1982
University of Arizona
Tucson, Arizona

Introduction

In fiscal year 1980-81, community colleges in Arizona began operating under spending and taxing limits which had been incorporated as constitutional amendments to the Constitution of the State of Arizona. The 1980-81 fiscal year was a period of transition. Not all of the limits were set or stabilized. Consequently, the current spending and taxing limits were not in full force until the 1981-82 fiscal year. The expenditure limit is intended to restrict district expenditures; however, there are some notable expenditure exclusions from the limit. The local county tax levy limit restricts total levy revenue to a two percent increase over the preceding year's levy, plus an additional amount of levy revenue produced from new construction. If a county is experiencing substantial new construction, total levy revenue may be well in excess of the two percent limit.

Prior to the June 3, 1980, voter approved constitutional amendments, community colleges in Arizona operated under no expenditure or revenue limitations. Two major sources of funding were state aid and local county levy revenue. State aid monies were paid in fixed flat grant amounts per yearly average full-time student equivalent (FTSE): Basic Aid at $680 for the first 1000 FTSE and $440 for each FTSE in excess of 1000, Vocational Aid at $272 for the first 1000 vocational FTSE and $176 for each vocational FTSE in excess of 1000. Capital Aid was paid at a rate of $175 for the first 5000 FTSE and $125 for each FTSE in excess of 5000. These flat grant amounts did not change from year to year; therefore, increases in state aid revenue could only be realized through increases in FTSE.

Community colleges were not prohibited from establishing a local tuition; however, as budgets increased, the local levy was usually tapped for the increased revenue needed to balance budgets. Community colleges required out

of state students to pay a tuition. Students attending from other counties had an out of county tuition paid for them by their county of residence. All students paid a student fee which usually supported the auxiliary fund. As the local taxpayer was called upon to shoulder an increasing and technically unlimited tax bill, the climate was right in Arizona for what some people called the "taxpayer revolt." In order to develop taxing and spending limits unique to Arizona and to avoid pitfalls associated with tax initiatives in other states, the Arizona legislature met in special session in the fall of 1979 to work on this issue. Proposed constitutional amendments were developed late in the spring of 1980 and were submitted to the voters June 3, 1980, where they were approved.

Structure of Funds and Sources of Revenue

In Arizona, fund accounting is used for the maintenance and reporting of financial data. A fund is a grouping of ". . .institutional resources that are available for, or restricted to, essentially, the same purpose" (Collier, 1975, pg.21). Funds are identified as follows: Fund 0 (Unrestricted General Fund), Fund 1 (Restricted), Fund 2 (Unrestricted Auxiliary Enterprises), Fund 3 (Loan Funds), Fund 4 (Endowments Funds), Fund 5 (Annuity and Life Income Funds), Fund 6 (Plant Funds), Fund 7 (Retirement of Indebtedness), Fund 8 (Investment in Plant) and Fund 9 (Agency Funds).

Basic and vocational state aid can be used as revenue for Fund 0 only. Capital state aid can be used as revenue for Funds 6 and 7. Levy monies can be used as revenue for Fund 0 and Fund 6. Some levy monies can also be used to retire bonded indebtedness, Fund 7. Tuition monies are generally used as revenue for Fund 0, although they could also be used in Funds 6 and 7. Student fee monies are generally used as revenue for Fund 2, and some

community colleges have also used fee monies to supplement Fund 0. As with tuition, these monies may be used as revenue in other funds.

The structure of fund accounting for community colleges has remained unchanged under the spending and taxing limitations. Also, the sources of funding have remained unchanged, although the nature of two sources, state aid and tuition, have changed. These changes will be discussed in following sections.

Community College Revenue and Expenditure Limits

Revenue Limit

Property in Arizona is taxed on the basis of its full cash or market value. Since the full sale price of a piece of property usually includes commissions and loan points, assessors generally tax on 85 percent of the full cash value. In Arizona there are two sets of property values. The first is primary or limited values, and the second is secondary or unlimited values. Secondary values correspond to the full cash value of property and are used to fund budget overrides and bond issues, which taxpayers must approve. Primary values are based on the 1979 property values and are constrained to rise not more than 10 percent per year or up to 25 percent of the difference between the primary and secondary values (after 1983). The primary property tax, which is the major tax, funds governmental activities other than those funded by the secondary property tax.

Current Arizona laws limit the growth on primary levies from one year to the next. The limitation is derived by computing the ratio between the primary assessed valuation of net new construction for a given year divided by the primary assessed vaulation of existing property from the previous year. That ratio is then multiplied by 1.02. The resulting fraction is added to

1.02, which produces a factor that is multiplied by the previous year's maximum primary levy to produce the current year's maximum primary levy. A community college district does not have to levy to the maximum primary amount. Also, each succeeding year's primary levy computations are based on the previous year's maximum, whether or not the district levied to the maximum.

A community college district can also levy a local tax for the payment of bonded indebtedness. This levy is referred to as the secondary levy; it represents a much smaller amount of revenue than the primary levy and it is not subject to limitation. The secondary levy is not affected by the expenditure limit, and it will not be discussed further in this paper.

None of the other sources of revenue are truly constrained. For example, student fees and tuition are established by each district, although they must be approved by the State Board of Directors of Community Colleges. Also, the basic and vocational state aid flat grant amounts are no longer fixed, unchanging from year to year. In 1981, the Legislature enacted into law legislation that allows for an annual increase in the flat grants of seven percent. This legislation was in effect for the 1981-82 fiscal year. This aid is still paid on a yearly average per FTSE basis as discussed above; however, the per FTSE amounts increase by seven percent a year. Thus, a district experiencing no change in enrollment would receive seven percent increases in basic and vocational state aid each year.

Expenditure Limit

A college's expenditure limit is determined prior to April 1, for each succeeding fiscal year by the Economic Estimates Commission, a state agency. The expenditure limit is determined by adjusting the 1979-80 expenditures of

local revenues for a district to reflect changes in the district's full-time student equivalents and the cost of living. Note that expenditure means money budgeted from revenues. Thus, the expenditure limit does not simply apply to expenditure budgets of the various funds; rather, it applies to some of the revenues in the revenue budgets of the various funds. It does not apply to all revenues. In fact, the expenditure limit is a limit on some revenues. A district cannot budget expenditures from those revenues in excess of the limits on those revenues.

There are a number of notable revenue exclusions from the limit, such as monies received from the issuance of bonds or other long-term obligations, monies received as payment of dividends or interest, federal grant monies, and tuition and fee monies. The expenditure limit does not limit on a fund basis; technically it applies to all funds. However, the effect of excluding certain revenues from the expenditure limit is to remove certain funds from the limit. For example, Fund 1, Restricted, is not limited if it contains the excludable federal grants, nor is Fund 7, Retirement of Indebtedness. Also, it is apparent that within some funds, some revenues may be limited, while other reveneus in the same funds may not. Therefore, total budgets for those funds that have some limited revenues may very well be different from those funds' budgets of only revenues that are limited.

The actual expenditure limit for a community college district is easy to determine. The 1979-80 expenditures of local revenues is a constant, and that number has been determined for each district. That number is then adjusted to reflect changes in the cost of living and in the district's full-time student equivalents. The Implicit Price Deflator (IPD) of the Gross National Product is used as the cost of living measure by the Economic Estimates Commission.

The IPD for 1978 has been determined. The IPD for the calendar year preceding the next fiscal year is then determined. The division of the latter IPD by the former IPD produces a quotient that is multiplied by the 1979-80 expenditure limit. Changes in the district's full-time student equivalents are determined by dividing 1979-80 actual FTSE into the next year's budgeted FTSE. The resulting quotient is also multiplied by the 1979-80 expenditure limit. The product that results from multiplying the 1979-80 expenditure limit by the two quotients is the next fiscal year's expenditure limit. Under current legal interpretation, that limit is not subject to change.

The Model

Each community college in Arizona must be concerned about whether the expenditure limit truly constrains or limits the district. Other concerns have to do with whether the constraint is immediate or will be a factor at some time in the future. Also, if the constraint is not immediate, under what conditions might it become a factor? These and other concerns are being discussed throughout the state. At Yavapai College, the Institutional Research Office was requested to study the expenditure and revenue limits and develop five-year projections of them.

Upon review of the literature on expenditure and revenue limitations, i.e., the Constitutional Amendments, the relevant statutes and applicable Attorney General's opinions, it became readily apparent that a number of interrelated variables would determine the effect of the expenditure limit on a district. Due to the number of variables involved, their interrelationships, and the inclusion of a five-year time frame, a computer model was developed to study the system. Barton defines a model as ". . .a representation of something else . . .." (1970, pg. 5) The system being

studied would consist of five years of expenditure limit projections, levy revenue limit projections, other revenue projections applicable to the expenditure limits, and the difference between the expenditure limit projections and revenue projections. Barton (1970) also refers to the system being studied as the object system or the real world. The computer model was intended to be a representation of this object system. The model has been used to produce a number of simulations or projections. Barton defines a simulation as ". . .the dynamic execution or manipulation of a model of an object system for some purpose." (1970, pg. 6) The main purpose of this project was to study the system in order to understand its behavior under different conditions. Masland states that a simulation ". . .permits the user to experiment and examine behavior under different conditions and assumptions." (1982, pg. 6) Although the college has little influence over most of the variables in the object system, the study of its behavior under

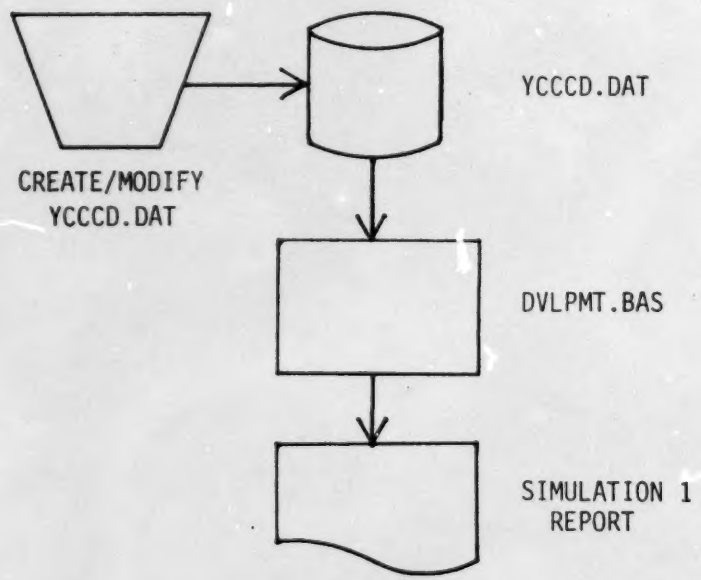

FIGURE 1

different variable conditions is considered to be meaningful and of primary importance. In fact, since the college has no apparent influence over some variables, and little influence over others, the model was not primarly intended to be a decision-making tool. It was, instead, intended to help decision-makers better understand the object system, as suggested by Bloomfield and Updegrove (1981). These authors argue that insight, not numbers, should be the most persuasive argument for modeling.

The model consists of a computer program written in BASIC and named DVLPMT.BAS. (See Figure 1.) This program accesses a disk-resident file, YCCCD.DAT which contains the variables and heading information required for a simulation. (See Appendix A.) Each execution of the program produces one five-year simulation. (See Appendix B.) The model is run online and in real-time; however, it is not interactive. The data file, YCCCD.DAT may be created/updated either through BASIC or the DEC-10 editing language, SOS. After each update of YCCCD.DAT, DVLPMT.BAS is executed and a simulation or five-year projection report is produced.

The five-year projection report consists of five one-year time frames starting with the current 1982-83 fiscal year. Each time frame is subdivided into four sections. The first section shows the computation of the expenditure limit. The second section shows the computation of the levy limit. The third section shows, by fund, all revenues applicable to the expenditure limit and possible general exclusions. It is necessary to provide for some exclusions in order to get funds to balance to the proper amounts of revenue applicable to the expenditure limit. The fourth section shows the difference between the expenditure limit and revenues applicable to it.

A number of variables affect the behavior of object system. Given the 1979-80 base expenditure limit, the Implicit Price Deflator of the Gross National Product and budgeted FTSE are the two variables required to compute the expenditure limit for any succeeding year. Given the preceding year's maximum primary levy, two variables are required to compute the new maximum primary levy. Those variables are assessed valuation on existing property and assessed valuation on new construction built since the previous tax year. State aid for Funds 0 and 6 is computed from projected actual FTSE. Finally, cash balances forward and other applicable revenues constitute additional variables in the model.

Simulations

The model has been used to make a number of simulations. Appendix C contains an abbreviated listing of the simulations. The major assumptions in each simulation are listed, along with the five-year projected expenditure limits, the revenues applicable to the limits, and the respective differences between the two.

The major assumptions that identify each simulation are listed in the report contained in Appendix C. Budgeted FTSE is used in the computation of the expenditure limit. While the expenditure limit is a budgeted number, actual revenue received will determine the effect of the expenditure limit. Consequently, projected actual FTSE is used to compute state aid, one major source of revenue applicable to the expenditure limit. Both the budgeted and projected actual FTSE figures are shown as the first two assumptions in the first simulation.

A seven percent annual increase in the Implicit Price Deflator is also assumed. Although the recent increase in the IPD has been greater than seven

percent, a continued deceleration in the rate of inflation could result in an annual IPD increase in the seven percent range.

The first simulation assumes a constant annual increase in the county assessed valuation of $40,000,000. Also, a $10,000,000 increase in net new construction is assumed for 1983-84. Subsequent yearly increases in net new construction are targeted at $30,000,000.

Finally, there is one assumption applicable to all simulations in this paper. That assumption concerns the cash balances forward and other revenue sources and the other exclusions for Fund 0 and Fund 6. It was thought that these monies should remain unchanged for all simulations. Consequently, these monies, which definitely affect the object system, are not modified in the simulations discussed in this paper. Their effect on the object system is felt, however. See Appendix B for the computer report containing the first simulation.

The second simulation contains all previous assumptions, except that budgeted FTSE is held constant at 2150 per year. Although the expenditure limit does not constrain revenues in this simulation, the limit does not increase in the final three years as rapidly as it did in the first simulation. The result is that the gap between the expenditure limit and applicable revenues is narrowed.

In the third simulation, both FTSE numbers are allowed to increase at a rate of three percent per year. In this simulation, there is an increasing gap between the expenditure limit and revenues applicable to it.

The fourth simulation is similar to the third except that the annual increase in the IPD is reduced to approximately six percent per year. This

view of the IPD is consistent with unofficial speculation from a source at the Economic Estimates Commission.

Simulations five and six are similar to simulation four except that assessed valuations are modified. Both simulations project yearly existing assessed valuations to be greater than in previous simulations. The fifth simulation also projects greater amounts of assessed valuation in net new construction than is projected in previous simulations, while simulation six projects lesser amounts.

The report contained in Appendix C is provided to institutional decision-makers. It can be seen that the revenue applicable to the expenditure limit does not equal or exceed the limit in the first six simulations. In these simulations, the expenditure limit does not constrain the district. The major reasons that the expenditure limit remains above revenue applicable to it are that the expenditure limit is based upon budgeted FTSE and levy revenue is restricted. For Yavapai College, budgeted FTSE is at least five percent greater than the respective projected actual FTSE, which is used to determine state aid revenue.

Another reason that the expenditure limit does not constrain the college in these projections is that the projected increases in the IPD are multiplied by the projected increases in budgeted FTSE. The effect of the multiplication is to produce an increase that is greater than what would result from either factor alone or both added together.

An additional reason the expenditure limit does not constrain the college in these simulations concerns the effect in absolute dollars that results from similar percentage increases in different amounts of original dollars. For example, while both sets of FTSE numbers do not increase in simulation two and

both sets increase at the same rate in simulation three, the gap increases substantially in the latter while it does not increase in the former. The absolute dollar increase of three percent on the expenditure limit is much greater than the absolute dollar increase of three percent on the much smaller amount of state aid.

If the expenditure limit does not constrain revenues applicable to the limit in these simulations, one might ask under what conditions the expenditure limit could constrain said revenues. Similarly, how sensitive is the object system to perturbations that would bring the expenditure limit into conflict with applicable revenues? Simulations seven, eight and nine address these questions.

Sensitivity testing is a concept frequently associated with problems of optimization. The concept, however, has received broader definition (Sheehan & Michaels, 1971). Although concerned with a study of costs, these authors postulated a notion of sensitivity testing that may find utility in a number of different studies: "Since there is no absolute standard against which to measure validity of final answers of the cost study, several sensitivity tests were undertaken to determine dependency of final results on certain steps in the procedures of the study." (1971, pg. 188) The last three simulations are based on this concept.

Simulation seven is a replication of the fifth simulation except for projected actual FTSE, which is modified to equal budgeted FTSE starting with the 1983-84 fiscal year. The question addressed in this simulation is whether increases in projected actual FTSE, up to the budgeted limit, would result in expenditure limit constraint. Simulation seven shows that even under these

conditions, sufficient applicable revenue is not generated to press the expenditure limit. The object system is not sensitive to FTSE as a variable.

Simulation eight represents an effort to modify assessed valuations sufficiently to produce enough applicable revenue to press the expenditure limit, beginning with the 1983-84 year. Again, this simulation is a replication of the fifth simulation except for modifications to assessed valuations. Assessed valuation modifications on existing property and on net new construction were derived through trial and error, the goal being to produce enough applicable revenue to approximate the expenditure limit. Revenues within $\pm$ $15,000 of the expenditure limit were considered sufficient. The only additional constraint in this simulation is the ten percent limit on the total assessed valuation increase on existing property from one year to the next. Assessed valuation on net new construction, however, is not limited.

This simulation shows the object system to be sensitive to increases in assessed valuation. In fact, the increases projected are well within the realm of possibility, given recent inflationary increases and in-migration in Yavapai County. Assessed valuations on existing property of $282,964,742, $343,964,742, $438,964,742, $527,964,742 and $630,964,742 and on net new construction of $33,115,358, $40,000,000, $45,000,000, $45,000,000 and $57,000,000 over the five-year period were required to produce revenues sufficient to press the limit. It can be argued that the IPD should be modified in some fashion to correspond to these assessed valuation modifications; however, there is not necessarily a direct relationship between the two. It is possible that the conditions modeled in this simulation could exist.

Simulation nine addresses the question of what changes in the IPD would be necessary to reduce the expenditure limit a sufficient amount to press existing applicable revenues. Again, this simulation is a replication of the fifth simulation with the exception of modifications to the IPD. As with the previous simulation, revenues within ± $15,000 of the expenditure limit were considered close enough to approximate equalling the limit. Annual Implicit Price Deflator numbers over the five-year period of 193.71, 199.5, 209.52, 221.07 and 230.5 were required to reduce the expenditure limit an adequate amount, starting with the 1983-84 fiscal year. The object system is sensitive to changes in the IPD and the projected modifications in the IPD are within the realm of reason, although they reflect a substantial decrease in rate of inflation.

Implications

This study shows that under the conditions described in simulations one through six, Yavapai College does not appear to be constrained by the expenditure limit. It must be remembered, however, that this study does not focus on the institution's total budget. The ability of the institution to meet the total budget is a very different situation and is beyond the scope of this study.

Two of the three sensitivity simulations show that, in fact, the district can be constrained under varying conditions of the IPD or assessed valuations or combinations of both. The district must be alert to conditions similar to those portrayed in these simulations. Although not addressed in these simulations, increases in cash balances forward or other revenues would exacerbate the problem.

Finally, under the current interpretation of the law, FTSE is not a factor that would cause this district to be in a position where the expenditure limit would constrain applicable revenue. It is important to remember, however, that windfall increases in FTSE could result in situations where corresponding increased FTSE revenue would not be possible. A district may not receive state aid in excess of the budgeted FTSE amount even if actual FTSE exceeds budgeted FTSE. It would remain true that the expenditure limit would not constrain the district; however, more serious problems of total budget revenue and expenditures would exist.

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APPENDIX A

YCCCD.DAT
FILE LAYOUT

DEFINITION	LINE NUMBER	VARIABLE I.D. AND FIELD IDENTIFICATION				
Identification	10	N$ District Name and I.D.				
Base Info.	20	E(1) 79-80 Base Limit	F3(1) 79-80 FTSE	D(1) 1978 GNP IPD	P(1) 81-82 Max Levy	
FTSE (Budgeted)	25	F3(2) 82-83	F3(3) 83-84	F3(4) 84-85	F3(5) 85-86	F3(6) 86-87
FTSE Basic	30	F(2) 82-83	F(3) 83-84	F(4) 84-85	F(5) 85-86	F(6) 86-87
FTSE Voc	40	G(2) 82-83	G(3) 83-84	G(4) 84-85	G(5) 85-86	G(6) 86-87
GNP IPD	50	D(2) 1981	D(3) 1982	D(4) 1983	D(5) 1984	D(6) 1985
Primary Valve of Assessed Property	60	V(2) 82-83	V(3) 83-84	V(4) 84-85	V(5) 85-86	V(6) 86-87
Net New Growth	70	N(2) 82-83	N(3) 83-84	N(4) 84-85	N(5) 85-86	N(6) 86-87
% of Total Levy to Apply to Fund 6	80	PZ(2) 82-83	PZ(3) 83-84	PZ(4) 84-85	PZ(5) 85-86	PZ(6) 86-87
Fund Ø Cash Forward	90	CØ(2) 82-83	CØ(3) 83-84	CØ(4) 84-85	CØ(5) 85-86	CØ(6) 86-87
Fund Ø Other	100	OØ(2) 82-83	OØ(3) 83-84	OØ(4) 84-85	OØ(5) 85-86	OØ(6) 86-87
Fund 2 Cash Forward	110	C2(2) 82-83	C2(3) 83-84	C2(4) 84-85	C2(5) 85-86	C2(6) 86-87
Fund 2 Other	120	Ø2(2) 82-83	Ø2(3) 83-84	Ø2(4) 84-85	Ø2(5) 85-86	Ø2(6) 86-87
Fund 6 Cash Forward	130	C6(2) 82-83	C6(3) 83-84	C6(4) 84-85	C6(5) 85-86	C6(6) 86-87
Fund 6 Other	140	Ø6(2) 82-83	Ø6(3) 83-84	Ø6(4) 84-85	Ø6(5) 85-86	Ø6(6) 86-87
Other Funds (Other)	150	Ø(2) 82-83	Ø(3) 83-84	Ø(4) 84-85	Ø(5) 85-86	Ø(6) 86-87

DEFINITION	LINE NUMBER	VARIABLE I.D. AND FIELD IDENTIFICATION				
Fund 0 (Other Exclusions)	160	EØ(2) 82-83	EØ(3) 83-84	EØ(4) 84-85	EØ(5) 85-86	EØ(6) 86-87
Fund 6 (Other Exclusions)	260	E6(2) 82-83	E6(3) 83-84	E6(4) 84-85	E6(5) 85-86	E6(6) 86-87

YCCCD.DAT

DATA FILE FOR SIMULATION 1

```
00010 "YAVAPAI COLLEGE, MODEL # 1"
00020 5881327,1815,150.05,4190660
00025 2150,2150,2250,2250,2350
00030 1990,1990,1990,1990,1990
00040 636,636,636,636,636
00050 193.71,207.27,221.78,237.3,253.91
00060 282964742,322964742,362964742,402964742,442964742
00070 33115358,23458000,26203097,28948193,31693289
00080 6.236,6.236,6.236,6.236,6.236
00090 1000000,900000,850000,850000,800000
00100 39982,200000,150000,150000,150000
00110 195725,100000,100000,100000,100000
00120 882191,926320,1018952,1120847,1232932
00130 85000,0,0,0,0
00140 0,0,0,0,0
00150 0,0,0,0,0
00160 0,0,0,0,0
00260 110983,0,0,0,0
```

APPENDIX B

PROJECTIONS FOR YAVAPAI COLLEGE, MODEL # 1

1982-83 PROJECTIONS

EXPENDITURE LIMIT COMPUTATIONS:

1979-80	BASE LIMIT			5,881,327.04
1982-83	ESTIMATED FTSE	2,150.00		
		----------	=	1,1846
1979-80	ACTUAL FTSE	1,815.00		
1981	ESTIMATED PRICE DEFLATOR	193.71		
		----------	=	1,2910
1978	ACTUAL PRICE DEFLATOR	150.05		
1982-83	EXPENDITURE LIMIT			8,994,006.64

LEVY LIMIT COMPUTATIONS:

1982-83	NET NEW PROPERTY	33,115,358.00		
		----------	=	0.1170
1982-83	PRIMARY A.V.	282,964,740.00		
	ALLOWANCE FOR NET NEW CONSTRUCTION * 1.02			
		0.1194		
1981-82	MAX ALLOWABLE LEVY (PRIMARY)			4,190,660.00
	FACTOR II.B.	1.1394		
1982-83	MAX ALLOWABLE LEVY (PRIMARY)			4,774,714.64

REVENUES APPLICABLE TO EXPENDITURE LIMIT:

1982-83	FUND 0		
	ST. AID BASIC	1,277,960.00	
	ST. AID VOC	197,796.00	
	LEVY	4,476,968.52	
	CASH FWD	1,000,000.01	
	OTHER	39,982.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	6,992,701.52	
1982-83	FUND 2		
	CASH FWD	195,725.00	
	OTHER	882,191.00	
	SUB TOTAL	1,077,916.00	
1982-83	FUND 6		
	ST. AID CAPITAL	348,250.00	
	LEVY	297,751.21	
	CASH FWD	85,000.00	
	OTHER	0.00	
	MINUS OTHER EXCLUSIONS	-110,988.00	
	SUB TOTAL	620,018.22	
1982-83	OTHER FUNDS		
	OTHER	0.00	
	SUB TOTAL	0.00	
1982-83	TTL REVENUE APPLICABLE TO EXP LIMIT		8,690,635.76

DIFFERENCE BETWEEN EXPENDITURE LIMIT & APPLICABLE REVENUE:

1982-83	EXPENDITURE LIMIT	8,994,006.64	
	APPLICABLE REVENUE	8,690,636.76	
	DIFFERENCE		303,370.88

PROJECTIONS FOR YAVAPAI COLLEGE, MODEL # 1

1983-84 PROJECTIONS

EXPENDITURE LIMIT COMPUTATIONS:

1979-80	BASE LIMIT			5,881,327.04
1983-84	ESTIMATED FISE	2,150.00	=	1,1845
1979-80	ACTUAL FISE	1,815.00		
1982	ESTIMATED PRICE DEFLATOR	207.27	=	1,3813
1978	ACTUAL PRICE DEFLATOR	150.05		
1983-84	EXPENDITURE LIMIT			9,623,601,12

LEVY LIMIT COMPUTATIONS:

1983-84	NET NEW PROPERTY	23,458,000.00	=	0.0726
1983-84	PRIMARY A.V.	322,964,740.00		
	ALLOWANCE FOR NET NEW CONSTRUCTION	* 1.02		
		0.0741		
1982-83	MAX ALLOWABLE LEVY (PRIMARY)			4,774,714.64
	FACTOR II.B.	1.0941		
1983-84	MAX ALLOWABLE LEVY (PRIMARY)			5,223,948.32

REVENUES APPLICABLE TO EXPENDITURE LIMIT:

1983-84	FUND 0		
	ST. AID BASIC	1,366,610.00	
	ST. AID VOC	211,788.00	
	LEVY	4,898,182.96	
	CASH FWD	900,000.00	
	OTHER	200,000.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	7,576,581.04	
1983-84	FUND 2		
	CASH FWD	100,000.00	
	OTHER	926,320.00	
	SUB TOTAL	1,026,320.00	
1983-84	FUND 6		
	ST. AID CAPITAL	348,250.00	
	LEVY	325,765.42	
	CASH FWD	0.00	
	OTHER	0.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	674,015.42	
1983-84	OTHER FUNDS		
	OTHER	0.00	
	SUB TOTAL	0.00	
1983-84	TTL REVENUE APPLICABLE TO EXP LIMIT		9,276,916.40

DIFFERENCE BETWEEN EXPENDITURE LIMIT & APPLICABLE REVENUE:

1983-84	EXPENDITURE LIMIT	9,623,601,12		
	APPLICABLE REVENUE	9,276,916,40		
	DIFFERENCE		346,684.75	
INCREASE IN EXPNDTUR LIMIT		629,594	% INCREASE:	7.00
INCREASE IN REV APPL TO LIMIT		586,280	% INCREASE:	6.75
INCREASE IN DIFFERENCE		43,313	% INCREASE:	14.28

PROJECTIONS FOR YAVAPAI COLLEGE, MODEL # 1

1984-85 PROJECTIONS

EXPENDITURE LIMIT COMPUTATIONS:

1979-80	BASE LIMIT			5,881,327.04
1984-85	ESTIMATED FTSE	2,250.00		
1979-80	ACTUAL FTSE	1,815.00	=	1.2397
1983	ESTIMATED PRICE DEFLATOR	221.78		
1978	ACTUAL PRICE DEFLATOR	150.05	=	1.4780
1984-85	EXPENDITURE LIMIT			10,776,248.40

LEVY LIMIT COMPUTATIONS:

1984-85	NET NEW PROPERTY	26,203,096.80		
1984-85	PRIMARY A.V.	362,964,740.00	=	0.0722
	ALLOWANCE FOR NET NEW CONSTRUCTION # 1.02			
				0.0736
1983-84	MAX ALLOWABLE LEVY (PRIMARY)			5,223,948.32
	FACTOR II.B.			1.0936
1984-85	MAX ALLOWABLE LEVY (PRIMARY)			5,713,096.32

REVENUES APPLICABLE TO EXPENDITURE LIMIT:

1984-85	FUND 0		
	ST. AID BASIC	1,462,230.00	
	ST. AID VOC	227,052.00	
	LEVY	5,356,827.60	
	CASH FWD	850,000.00	
	OTHER	150,000.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	8,046,109.60	
1984-85	FUND 2		
	CASH FWD	100,000.00	
	OTHER	1,018,952.00	
	SUB TOTAL	1,118,952.00	
1984-85	FUND 6		
	ST. AID CAPITAL	348,250.00	
	LEVY	356,268.69	
	CASH FWD	0.00	
	OTHER	0.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	704,518.70	
1984-85	OTHER FUNDS		
	OTHER	0.00	
	SUB TOTAL	0.00	
1984-85	TTL REVENUE APPLICABLE TO EXP LIMIT		9,869,580.40

DIFFERENCE BETWEEN EXPENDITURE LIMIT & APPLICABLE REVENUE:

1984-85	EXPENDITURE LIMIT	10,776,248.40		
	APPLICABLE REVENUE	9,869,580.40		
	DIFFERENCE			906,668.12
INCREASE IN EXPNDTUR LIMIT		1,152,647	% INCREASE:	11.98
INCREASE IN REV APPL TO LIMIT		592,664	% INCREASE:	6.39
INCREASE IN DIFFERENCE		559,983	% INCREASE:	161.53

PROJECTIONS FOR YAVAPAI COLLEGE, MODEL # 1

1985-86 PROJECTIONS

EXPENDITURE LIMIT COMPUTATIONS:

1979-80	BASE LIMIT			5,881,327.04
1985-86	ESTIMATED FTSE	2,250.00		
1979-80	ACTUAL FTSE	1,815.00	=	1.2397
1984	ESTIMATED PRICE DEFLATOR	237.30		
1978	ACTUAL PRICE DEFLATOR	150.05	=	1.5815
1985-86	EXPENDITURE LIMIT			11,530,362.40

LEVY LIMIT COMPUTATIONS:

1985-86	NET NEW PROPERTY	28,948,193.20		
1985-86	PRIMARY A.V.	402,964,740.00	=	0.0718
	ALLOWANCE FOR NET NEW CONSTRUCTION # 1.02			
				0.0733
1984-85	MAX ALLOWABLE LEVY (PRIMARY)			5,713,096.32
	FACTOR II.B.			1.0933
1985-86	MAX ALLOWABLE LEVY (PRIMARY)			6,245,984.16

REVENUES APPLICABLE TO EXPENDITURE LIMIT:

1985-86	FUND 0		
	ST. AID BASIC	1,564,830.00	
	ST. AID VOC	242,952.00	
	LEVY	5,856,484.56	
	CASH FWD	850,000.00	
	OTHER	150,000.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	8,664,266.64	
1985-86	FUND 2		
	CASH FWD	100,000.00	
	OTHER	1,120,847.00	
	SUB TOTAL	1,220,847.00	
1985-86	FUND 6		
	ST. AID CAPITAL	348,250.00	
	LEVY	389,499.57	
	CASH FWD	0.00	
	OTHER	0.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	737,749.58	
1985-86	OTHER FUNDS		
	OTHER	0.00	
	SUB TOTAL	0.00	
1985-86	TTL REVENUE APPLICABLE TO EXP LIMIT		10,622,863.20

DIFFERENCE BETWEEN EXPENDITURE LIMIT & APPLICABLE REVENUE:

1985-86	EXPENDITURE LIMIT	11,530,362.40		
	APPLICABLE REVENUE	10,622,863.20		
	DIFFERENCE			907,499.12
INCREASE IN EXPNDTUR LIMIT		754,113	% INCREASE:	7.00
INCREASE IN REV APPL TO LIMIT		753,282	% INCREASE:	7.63
INCREASE IN DIFFERENCE		831	% INCREASE:	0.09

PROJECTIONS FOR YAVAPAI COLLEGE, MODEL # 1

1986-87 PROJECTIONS

EXPENDITURE LIMIT COMPUTATIONS:

1979-80	BASE LIMIT			5,881,327.04
1986-87	ESTIMATED FTSE	2,350.00		
1979-80	ACTUAL FTSE	1,815.00	=	1.2948
1985	ESTIMATED PRICE DEFLATOR	253.91		
1978	ACTUAL PRICE DEFLATOR	150.05	=	1.6922
1986-87	EXPENDITURE LIMIT			12,885,769.80

LEVY LIMIT COMPUTATIONS:

1986-87	NET NEW PROPERTY	31,693,289.20		
1986-87	PRIMARY A.V.	442,964,740.00	=	0.0715
	ALLOWANCE FOR NET NEW CONSTRUCTION + 1.02			
		0.0730		
1985-86	MAX ALLOWABLE LEVY (PRIMARY)			6,245,984.16
	FACTOR II.B.	1.0930		
1986-87	MAX ALLOWABLE LEVY (PRIMARY)			6,826,729.92

REVENUES APPLICABLE TO EXPENDITURE LIMIT:

1986-87	FUND 0		
	ST. AID BASIC	1,674,400.00	
	ST. AID VOC	259,488.00	
	LEVY	6,401,015.04	
	CASH FWD	800,000.00	
	OTHER	150,000.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	9,284,903.12	
1986-87	FUND 2		
	CASH FWD	100,000.00	
	OTHER	1,232,932.00	
	SUB TOTAL	1,332,932.00	
1986-87	FUND 6		
	ST. AID CAPITAL	348,250.00	
	LEVY	425,714.88	
	CASH FWD	0.00	
	OTHER	0.00	
	MINUS OTHER EXCLUSIONS	0.00	
	SUB TOTAL	773,964.88	
1986-87	OTHER FUNDS		
	OTHER	0.00	
	SUB TOTAL	0.00	
1986-87	ITL REVENUE APPLICABLE TO EXP LIMIT		11,391,800.00

DIFFERENCE BETWEEN EXPENDITURE LIMIT & APPLICABLE REVENUE:

1986-87	EXPENDITURE LIMIT	12,885,769.80		
	APPLICABLE REVENUE	11,391,800.00		
	DIFFERENCE			1,493,969.76
INCREASE IN EXPNDTUR LIMIT		1,355,407	% INCREASE:	11.76
INCREASE IN REV APPL TO LIMIT		768,936	% INCREASE:	7.24
INCREASE IN DIFFERENCE		586,470	% INCREASE:	64.62

APPENDIX C

YAVAPAI COLLEGE
FIVE-YEAR
EXPENDITURE AND REVENUE LIMIT
PROJECTIONS

I.R. Ofc.
Fall 1982
Revised Projections

SIMULATION	ASSUMPTIONS	DATE	EXPENDITURE LIMIT	REVENUE APPLICABLE TO LIMIT	DIFFERENCE BETWEEN EXP. LIMIT AND REVENUE APPLICABLE TO LIMIT
1.	- Budgeted FTSE over 5 years: 2150, 2150, 2250, 2250, 2350. - Projected constant FTSE of 1990 total and 636 vocational. - 7% increase in IPD per year. - Assessed valuation increased by 4% per year. - Net new growth decreases by approximately 10% in 83-84 and then increases by approximately 30% in ensuing years.	82/83	8,994,006	8,690,635	303,370
		83/84	9,623,601	9,276,916	346,684
		84/85	10,776,248	9,869,580	906,668
		85/86	11,530,362	10,622,863	907,499
		86/87	12,885,769	11,391,800	1,493,969
2.	- Same assumptions as in #1 except budgeted FTSE is a constant 2150.	82/83	8,994,006	8,690,635	303,370
		83/84	9,623,601	9,276,916	346,684
		84/85	10,297,304	9,869,580	427,723
		85/86	11,017,901	10,622,863	395,038
		86/87	11,789,108	11,391,800	397,308
3.	- Same assumptions as in #1 except budgeted FTSE increases from 2150 by 3% per year. Projected actual FTSE starts at 2038 and 651 and increases by 3% per year.	82/83	8,994,006	8,727,892	266,113
		83/84	9,914,547	9,367,111	547,435
		84/85	10,924,721	10,019,311	905,410
		85/86	12,037,698	10,839,217	1,198,481
		86/87	13,269,601	11,685,216	1,584,385

SIMULATION	ASSUMPTIONS	DATE	EXPENDITURE LIMIT	REVENUE APPLICABLE TO LIMIT	DIFFERENCE BETWEEN EXP. LIMIT AND REVENUE APPLICABLE TO LIMIT
4.	- Same assumptions as in model #3 except the IPD increase is reduced to a more conservative estimate (193.71, 205.91, 218.06, 230.93, 244.55)	82/83	8,994,006	8,727,892	266,113
		83/84	9,849,492	9,367,111	482,381
		84/85	10,741,476	10,019,311	722,165
		85/86	11,714,562	10,839,217	875,345
		86/87	12,780,437	11,685,216	1,095,221
5.	- Same assumptions as in model #4 except county assessed valuation is increased by approximately 10% per year in addition to the net new construction of 38M for the last four years.	82/83	8,994,006	8,727,892	266,113
		83/84	9,849,492	9,551,415	298,077
		84/85	10,741,476	10,326,578	414,898
		85/86	11,714,562	11,205,450	509,112
		86/87	12,780,437	12,043,334	737,103
6.	- Same assumptions as in model #4 except county assessed valuation is increased by approximately 7% per year in addition to the net new construction of 20M for the last four years.	82/83	8,994,006	8,727,892	266,113
		83/84	9,849,492	9,303,295	546,197
		84/85	10,741,476	9,847,324	894,151
		85/86	11,714,562	10,511,160	1,203,402
		86/87	12,780,437	11,148,950	1,631,487

SENSITIVITY SIMULATIONS

SIMULATION	ASSUMPTIONS	DATE	EXPENDITURE LIMIT	REVENUE APPLICABLE TO LIMIT	DIFFERENCE BETWEEN EXP. LIMIT AND REVENUE APPLICABLE TO LIMIT
7.	- Same assumptions as in model #5 except that projected actual FTSE is made to equal budgeted FTSE starting in 1983-84: basic = 2038, 2215, 2281, 2349 & 2420; vocational = 651, 708, 729, 750 & 773.	82/83	8,994,006	8,727,892	266,113
		83/84	9,849,492	9,645,846	203,646
		84/85	10,741,476	10,428,880	312,596
		85/86	11,714,562	11,316,972	397,590
		86/87	12,780,437	12,164,864	615,573
8.	- Same assumptions as in model #5 except that assessed valuations are modified starting with the 1983-84 year to produce revenues sufficient to approximate the expenditure limit.	82/83	8,994,006	8,727,892	266,113
		83/84	9,849,492	9,862,914	(13,421)
		84/85	10,741,476	10,738,442	3,034
		85/86	11,714,562	11,713,307	1,254
		86/87	12,780,437	12,777,038	3,399
9.	- Same assumptions as in model #5 except that IPD is modified starting with the 1983-84 year to reduce the expenditure limit enough to approximate revenues applicable to the expenditure limit.	82/83	8,994,006	8,727,892	266,113
		83/84	9,542,877	9,551,415	(8,538)
		84/85	10,320,802	10,326,578	(5,775)
		85/86	11,214,386	11,205,450	8,936
		86/87	12,046,170	12,043,334	2,836

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8118 Math Sciences Building
University of California
Los Angeles, CA 90024

March 4, 1983